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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,280	07/18/2003	Sagie Tsadka	64992/P001US/10308762	2407

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EXAMINER

HELLNER, MARK

ART UNIT PAPER NUMBER

3663

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,280

Applicant(s)

TSADKA ET AL.

Examiner

Mark Hellner

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-34 and 36-51 is/are allowed.
- 6) ☒ Claim(s) 1-14, 35 and 52-63 is/are rejected.
- 7) ☒ Claim(s) 15, 16, 64 and 65 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-12, 35, 52-61 are rejected under 35 U.S.C. 102(b) as being anticipated by Cho et al.

Cho et al disclose a device for regeneration of optical signals, the device comprising: a continuous wave laser source (110); a semiconductor electro-absorption modulator (SEAM) coupled to the CW laser; means (130) for inputting an optical signal that counter-propagates with respect to the CW signal within the SEAM; and a filter (140) coupled to the SEAM such that the chirped output signal (regenerated data (265)) is passed.

The structure recited above teaches claims 1, 2, 4, 5, 6, 7, 8, 9, 35, 52, 53, 56, 57 and 58.

Claims 10, 11, 59 and 60 are taught by column 7, line 45 to column 8, line 30.

Claims 12 and 61 are taught because wavelength tuning is an inherent feature of the DFB laser disclosed as the probe light source.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 13, 14, 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al.

Claim 3 would have been obvious because a semiconductor optical amplifier also exhibits non-linear transmission characteristics that are similar to the SEAM disclosed by Cho et al and, as such, would have been an obvious substitution recognizable by a person of ordinary skill in the art of optical materials.

A high pass filter with a step function performs the function required by element (140) of Cho et al and, as such, would have rendered claims 13, 14, 62 and 63 obvious to a person of ordinary skill in the art constructing the device of Cho et al.

Claims 15, 16, 64 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Cho et al reference does not teach or suggest the use of an interleaver.

Claims 17-34 and 36-51 are allowed.

Claim 17 is allowed for at least claiming counter-propagating a separate CW signal with each of a plurality of optical signals.

Claims 18-21 depend on claim 17.

Claim 22 is allowed for reciting that the input optical signal and the CW signal counter-propagate in an SOA in a cross-gain mode.

Claims 23-34 depend on claim 22.

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Claim 36 defines the use of an interleaver in a context not taught or suggested by the art of record.

Claims 37-40 depend on claim 36.

Claim 41 defines the combination of an interleaver and plurality of SOAs in a manner not suggested by the prior art.

Claims 42-51 depend on claim 41.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Leuthold and Kelsoe et al demonstrate the level of skill in the art pertaining to the present application.

Any inquiry concerning this communication should be directed to Mark Hellner at telephone number 703 306 4155.

Mark Hellner

Primary Examiner

AU 3663

A handwritten signature in black ink that reads "Mark Hellner". The signature is written in a cursive style with a large, stylized 'M' and 'H'.